

REMARKS

Applicant thanks Examiner Kruer for the Office Action mailed March 2, 2004, [Paper 11]. In response to the March Office Action, the present application has been carefully reviewed and amended. Entry of the present amendment and reconsideration of the application is respectfully requested.

Statutory Double Patenting*Claims 61 and 69*

Claims 61 and 69 stand rejected under 35 USC §101 as claiming the same invention of Claims 17 and 24 of US Patent 6,406,785.

Claims 61 and 69 have been canceled, and thus the rejection under 35 USC §101 is believed to be overcome.

Non Statutory Double Patenting*Claims 37-60, 62-68 and 70-83*

Claims 37-60, 62-68 and 70-83 stand rejected under the judicially created doctrine of obviousness-type double patenting.

Upon resolution of the remaining rejections, applicant will submit a terminal disclaimer to overcome the rejections under the judicially created doctrine of obviousness type double patenting for Claims 37-60, 62-68 and 70-83 in view of US patent 6,406,785.

Rejections under 35 USC §103*Claims 42, 45-48, 50, 52-58, 60, 62-68 and 70-72*

Claims 42, 45-48, 50, 52-58, 60, 62-68 and 70-72 stand rejected under 35 USC §103 of as being unpatentable over Chihara (US 5,115,007) in view of Nybakken (US 5,605,657) as evidenced by Howell (US 5,972,520) and McCurdy (US 5,451,457).

Chihara

Examiner Kruer relies upon the primary reference Chihara (US 5,115,007) to disclose weatherstrips for automobile glass run channels in which an EPDM

substrate is coated with a low friction, abrasion resistant coating composition which is comprised of a thermosetting polymeric binder derived from a block urethane prepolymer solution which is compounded with silicone oil and a cross linking agent, wherein micropowders may be included in the composition. [Paper 11, page 3]

Applicant respectfully submits the micropowders of Chihara are not the presently recited projection forming surface treated thermoplastic particles.

Chihara does not define the size of the recited micropowders. However, US patents 6,727, 536; 6,531,557 and 6,451,914 recite micropowders of a size 3×10^{-9} m, $150-250 \times 10^{-9}$ m and $50-400 \times 10^{-9}$ m, respectively.

In contrast, the claims have been amended to recite in part "the thermoplastic particles having a size greater than approximately 20 microns (Claims 42-46); "the particles having a size of at least approximately 20 microns" (Claims 47-55 and 78-79); "the particles of a size greater than approximately 20 microns" (Claim 56); "having a size greater than approximately 20 microns" (Claims 57-60, 61-64 and 80-81); "a size between approximately 20 microns and approximately 200 microns" (Claims 65-68, 70-72 and 82-83).

The claimed size of the present surface roughness forming particles is on the order of 1,000 greater than micropowders as believed employed in Chihara. Applicant submits this distinguishes the presently recited particles from the micropowder of Chihara.

Chihara further supports the limited size of the micropowder. As stated in Chihara, the abrasion resistant and low friction characteristics are imparted by the thermosetting composition. (Col. 2, Lines 13-15) The Chihara micropowders do not reduce the friction of the Chihara weatherseal. The micropowders relied upon by the examiner are an optional aspect of Chihara and are not employed to provide abrasion resistance or low friction. (Col. 2, Lines 27-29) This also suggests the micropowder is of the 10^{-9} m size, as the micropowders are not

employed to reduce friction, but rather as filler and viscosity control (Col. 6, lines 60-65).

Chihara expressly states "an important aspect of the present invention is the use of cross linking agents to obtain improved physical properties such as abrasion resistance." (Col. 4, Lines 62-64). Thus, Chihara discloses a specific thermoset material for providing abrasion resistance and low friction. The micropowders of Chihara are not necessary and do not provide the desired abrasion resistance and low friction functionality. (Abstract, Col. 2, lines 12-27, Col. 4, lines 62-64).

Further supporting the distinction between micropowders and the present particles is the requirement of Chihara to provide a flat surface. Chihara repeatedly discloses a flat, uniform surface of the resulting cured film. Chihara states "the appearance of the cured coating film is uniform and homogenous." (Col. 7, Lines 19-21) In addition, "all the mixtures (resin I) of B, C, D, E and F dry to form a flat and uniform coating." (Col. 10, line 35-36.) Further, as set forth in Column 6, Lines 61-66, the additives are employed in part, to "provide a flat, non-glossy appearance."

The micropowders of Chihara are used as fillers, to control viscosity and provide a flat, non-glossy appearance, proper hardness and toughness to the applied cured coating film. (Col. 6, Lines 61-66.)

Therefore, applicant respectfully submits Chihara does not provide disclosure of the present weatherseal and retained particles.

Nybakken

Nybakken is relied upon to disclose "a lubricant containing active hydrogen on its surface treatment can be chemically bind with the urethane prepolymer and become part of the subsequent polyurethane." [Paper 11, page 4]. Further, Nybakken is relied upon to disclose "effective lubricants include surface

treated ultra high molecular weight polyethylenes. (col. 6, lines 1+)." [Paper 11, page 4].

Applicant respectfully submits the "surface treated" particles of Nybakken are *coated* and not surface treated as set forth in the present disclosure and claims.

Specifically, Nybakken recites:

Surface treated Ultra High Molecular Weight PolyEthylene (UHMWPE) and surface treated particles sold under the registered trademark "Teflon" by E.I. DuPont De Nemours and Company are also available. The UHMWPE particles can be treated with a coupling agent such as titanate (for example Kendric's KR46B) to provide the active hydrogen termination coating.

Titanate is separate material that is applied to the UHMWPE particles in Nybakken. Thus, the "surface treated" particles of Nybakken are actually *coated*, wherein the coating provides the active hydrogen termination. The particle material of Nybakken is not surface treated as in the present application, but rather coated with another material. In contrast, the material of the present particles have permanent changes to the structure and properties of the particle material and particularly to include a polar functional group. The present particles are surface treated, such as by exposure to reactive gasses, prior to combination with the thermoset carrier.

Applicant believes the recited "surface treated" particles clearly distinguish the "coated" particles of Nybakken. If however, the examiner believes further language is required to distinguish "surface treated" from "coated", applicant invites the examiner to call the undersigned to discuss any such language.

Therefore, as the examiner has recognized that Chihara does not disclose the recited surface treated particles [paper 11, page 4] and Nybakken coats the particles to provide the active hydrogen termination, applicant respectfully

submits the asserted rejection based on Chihara and Nybakken has been overcome.

With respect to the combination of Chihara and Howell to assert that "the disclosure in Chihara that the particles provide the weatherstripping they non-glossy appearance is understood to teach that the particles provide the surface of the weather strip with surface projections." [Paper 11, page 5], applicant directs the examiner's attention to the recited size of the present particles and view of the micropowders of Chihara. Further, Chihara repeatedly recites the resulting surface as a flat (Col 6, line 64; Col. 10, lines 36, 50; Col. 11, lines 6, 32, 49 and Col. 12, line 46). Further, as the thermoset coating of Chihara provides the reduced friction of the weatherseal, there is no motivation to employ particles. That is, the only suggestion for such modification is in light of the present application.

Claims 37-40, 42-50, 52-60, 62-68, 70-72 and 75

Claims 37-40, 42-50, 52-60, 62-68, 70-72 and 75 stand rejected under 35 USC §103 of as being unpatentable over Chihara (US 5,115,007) in view of Nybakken (US 5,605,657) as evidenced by Howell (US 5,972,520) and McCurdy (US 5,451,457) and Shih (US 5,130,376).

Claim 40 has been amended to define the particles "having a size greater than approximately 20 microns." Therefore, applicant respectfully reasserts the responses in view of Chihara (US 5,115,007), Nybakken (US 5,605,657) and Howell (US 5,972,520).

With respect to McCurdy, the examiner states "Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to surface treat the UHMW polyethylene particles taught by Chihara in view of McCurdy so that said particles contain active hydrogen. The motivation for doing so would have been to improve the way or of the weather strip and to prevent the polyethylene particles from bleeding to the surface of the cure polyurethane strip." [Paper 11, page 8]

Applicant respectfully submits such motivation is contrary to the primary reference. That is, Chihara provides a polymeric binder system including a blocked polyurethane prepolymer produced by reacting a low molecular weight hydroxyl terminated hydrogenated polymer or polyolefin with excess equivalents of polyisocyanate and then blocking the free isocyanate groups, a cross-linking agent coreactive with the blocked polyurethane prepolymer and silicon oil. It is this thermosetting coating composition that provides the tough abrasion resistant and low friction characteristics provided by Chihara. [Col. 2, lines 12 –15]. The “particles” (micropowders) of Chihara are optional and are used as fillers and viscosity control. As the Chihara micropowders are used as fillers there is no bleeding or bonding issues to be “improved” in Chihara. That is, the examiner has not identify any portion of Chihara which corresponds to the asserted motivation.

McCurdy is relied upon to disclose that “all polyethylene particles exhibit a low coefficient of friction contact with glass (col. 3, lines 6 and 7), but polyethylene particles with a molecular weight of at least 1,000,000 also exhibit excellent abrasion resistance and toughness (col. 2, lines 64+).” [Paper 11, page 7]

McCurdy is directed to the protection of a pyrolytically coated glass sheet, wherein an interleaving polyethylene material is used to allow face to face stacking of the glass sheets without marring. McCurdy does not cure any of the deficiencies of the primary, secondary or tertiary references with respect to the formation of a weatherseal having a multitude of friction reducing projection forming surface treated thermoplastic particles, having a size greater than approximately 20 microns, bonded to a thermoset carrier.

Therefore, applicant respectfully reasserts the distinctions between the primary secondary tertiary and quaternary references as set forth in rejection of Claims 42, 45-48, 50, 52-58, 60 62-66, 68 and 70 to 72.


With respect to the examiner's reliance on Hazeltine, applicant notes Hazelton is directed to a dynamically vulcanized alloy (DVA) comprising a

thermoplastic copolymer resin and a rubber, wherein at least a part of the rubber has been dynamically vulcanized to a fully cured state. The proposed substitution of the Chihara EPDM substrate with thermoplastic elastomer would be contrary to the express disclosure of Chihara.

Chihara is directed to automotive window glass run channels made from ethylene-propylene-diene polymers (EPDM). Chihara is expressly directed to the bonding performance of a coating to an EPDM substrate. Applicant respectfully submits the proposed interchangeability to thermoplastic elastomers and EPDM as the substrate is just not supported by the cited references. Chihara repeatedly and expressly directed to a coating for an EPDM substrate. (Col. 1, lines 18-20; Col. 2, lines 23-25; Co. 7, lines 8-10; Col. 10, lines 32-33, 41-42 and 59-60; Col. 11, lines 14-15, 23-24 and 43-44; Col. 12, lines 22-25, 35-36 and 50-53 and Col. 16, lines 33-36 and 44-45). That a TPE includes a thermosetting material does not account for the fact that TPEs behave as a thermoplastic, in that the TPE can be remelted and reformed. The complete substitution of the EPDM of Chihara is not supported by the prior use of a TPE weatherseal body. There is no suggestion that Chihara coating would even bond to a TPE, much less a thermoplastic.

Therefore, applicant respectfully submits all the pending claims, Claims 37-60, 62-69 and 70-85 are in condition for allowance, and such action is earnestly solicited. If, however, the examiner believes any further issues remain, he is cordially invited to call the undersigned so that such matters can be promptly resolved.

Respectfully submitted,



Brian B. Shaw, Registration No. 33,782
HARTER, SECRET & EMERY LLP
1600 Bausch & Lomb Place
Rochester, New York 14604

Date: June 2, 2004